

BEST AVAILABLE COPYREMARKS

General: In the following response, it is assumed per Examiners instructions, that the references to ("Tissue") is U.S. 5450202 ("Tissue"), that the reference to 5450202 issued to Nagayasu under paragraph 9 is 5164896 and that the reference "regarding claim 6" under paragraph 8 near the bottom of page 5 is actually claim 11.

Claims 5 to 14 are objected to for obviousness-type double patenting as being unpatentable over claims 1 to 12 of U.S. 6697683. A terminal disclaimer has been included to shorten the term of the instant application to correspond to that of U.S. 6697683 both the patent and application owned 100% by the applicant as sole inventor. For the record, Applicant believes that the instant application is substantially the same invention as the subject matter of said U.S. 6697683. In the conversation with Examiner, authorizing the Examiners amendment resulting is U.S. 6697683, Examiner asserted that the claims covered more than one invention, although the term "restriction" was not specifically used by Examiner. Applicant inquired about and believed that restriction was being required.

Claims 5 to 6 and 8 to 14 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. 5450202. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 5450202. Applicant believes these objections are circumvented by the following arguments.

Regarding specific objections by Examiner in the office action:

Paragraph 7

Examiner objects to claims 5 to 14 as being anticipated by U.S. 6697683. Applicant asserts that execution of the Terminal Disclaimer removes the non-statutory double patenting rejection of claims 5 to 14 as being unpatentable over claims 1 to 12 of U.S. 6697683.

BEST AVAILABLE COPY**Paragraph 8****Regarding claim 5**

Examiner objects to claim 5 under 35 U.S.C. 102(b) as being anticipated by U.S. 5450202 ("Tissue") and specifically asserts that Tissue teaches an agile positioner means responsive to an actual position of a substantially non-resonant load (col. 11 lines 42 to 47) ... Applicant submits that the reference in col. 11 lines 46 and 47 to a "low frequency (non-resonant) transfer function." is a reference to the explanation tool, used by Tissue, and called a "position equivalent drive" to explain the drive algorithm and does not relate to the response function of or the nature of the actuator/load (see col. 11 lines 42 to 45). The "position equivalent drive" is the steady state relationship between the ~~current drive and the resulting angular deflection independent of a specific resonant~~ current drive and the resulting angular deflection independent of a specific resonant nature. This is also emphasized in col. 11 lines 47 to 50 where it states "after oscillations damp out."

The industry is replete with examples of this "low frequency (non-resonant) transfer function." concept. See, for instance, chapter 3 of Transformation Calculus and Electrical Transients by Goldman. Goldman teaches the concept of the separation of the transient solution from the steady state solution.

For further emphasis of this point, note that Fig. 18 of the referenced patent shows the highly oscillatory/resonant behavior expected. Additionally, the drive method described in col. 10 lines 30 to 52 results in the formula of col. 10 lines 47 and 48 for the solution of the motion. That formula, which is a keystone of U.S. 5450202, would be incorrect and inapplicable if the system were non-resonant. Note also, in said formula, that the expected (see col. 11 lines 50 to 58) overshoot of 90% to 99% is also indicative of a highly un-damped and resonant configuration. A non-resonant device has negligible overshoot; i.e. ~0% not 90% to 99% overshoot.

The specification and claims of the cited reference repeatedly refer to a resonant positioner and no reference to a non-resonant actuator exists in the entirety of the specification or claims. Furthermore, as would be obvious to one skilled in the art, the

3

Applicant submits that dependent claim 8 is patentable for the same reasons given with respect to claim 5 and is only narrowed by its restriction to equal and opposite drive

4